

What is claimed is:

1. An imaging optical system comprising:

in order from an object side,

a first lens having positive refracting power,

a second lens having negative refracting power, a concave surface of which is directed toward the object side,

a third lens having positive refracting power, a convex surface of which is directed toward an image side

and

a fourth lens having negative refracting power,

wherein the second lens and the third lens are cemented.

2. An imaging optical system according to claim 1 comprising:

an aperture stop which is arranged at the object side of the first lens.

3. An imaging optical system comprising:

in order from an object side,

a first lens having positive refracting power,

a second lens having negative refracting power, a concave surface of which is directed toward the object side,

a third lens having positive refracting power, a convex surface of which is directed toward an image side

and

a fourth lens having negative refracting power,

wherein the first lens consists of glass and the second lens and the third lens are cemented.

4. An imaging optical system according to claim 1:

wherein at least one of surfaces of the fourth lens is aspherical and the following condition is satisfied:

$$-1.0 < \phi_m / \phi_P < 0.25$$

Where ϕ_m represents the power of the lens at the position of the maximum light height and ϕ_P represents the power of the lens at the position of the paraxis.

5. An imaging optical system according to claim 3, wherein both refracting surfaces of the first lens are spherical .

6. An imaging optical system according to claim 3, wherein the following condition is satisfied:

$$0.4 < f/f_1 < 2.0$$

Where f represents the focal length of the whole optical system and f_1 represents the focal length of the first lens.

7. An imaging optical system according to claim 1, wherein the following condition is satisfied:

$$0.5 < r_{2f}/r_{3r} < 4.0$$

Where r_{2f} represents the radius of curvature of the second lens at the object side and r_{3r} represents the radius of curvature of the third lens at the image side.

8. An imaging optical system according to claim 1, wherein the second lens and the third lens are cemented ,and the following conditions are satisfied:

$$0.3 < f_{123}/|f_4| < 2.0$$

$$0.5 < f/|f_4| < 2.0$$

where f_{123} represents composite focal length of the cemented lens consisting of the first, the second and the third lens, f_4 represents the focal length of the fourth lens, and f represents the focal length of whole optical system.

9. An imaging optical system according to claim 1, wherein the following condition is satisfied:

$$0.6 < EXP/f < 2.0$$

where EXP represents the length from an object plane to an exit pupil and f represents the focal length of whole optical system.

10. An electronic instrument comprising the imaging optical system according to claim 1,

11. An imaging optical system according to claim 1 or 3, wherein the following condition is satisfied:

$$0.40 (1/\mu m) < Fno/P(\mu m) < 2.20 (1/\mu m)$$

where Fno represents the F number fully opened and P represents the pitch of an imaging element.

12. An imaging optical system according to claim 3, wherein the following condition is satisfied:

$$0.045 < ML/TL < 0.100$$

where TL represents whole length of the optical system and ML represents the minimum thickness on the axis of a plastic lens.

13. An imaging optical system according to claim 1 or 3, wherein the following condition is satisfied:

$$-0.30 < Rave/Rc < 0.15$$

where Rc represents the radius of curvature of the cemented surface

of the cemented lens and R_{ave} represents an average value of the radius of curvature of incident side and that of exit side.